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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,903

01/17/2006

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1547USWO

7166

22462

7590

09/20/2011

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EXAMINER

HUYNH, NAM TRUNG

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

09/20/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,903	Applicant(s) FARRILL ET AL.	
	Examiner NAM HUYNH	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-16 and 43-58 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-16 and 43-58 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed 7/13/11. Claims 1 and 43 have been amended.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-7, 9, 12, 43-49, 51, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders, III et al. (US 6,138,011) (hereinafter Sanders) in view of Edwards (US 2004/0228292).

Regarding claims 1 and 43, Sanders teaches a system for providing group voice services in a cellular network, comprising:

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a cellular network (existing cellular network) for making calls between handsets, wherein the calls are initiated by call setup and in-band signaling (call request signal containing control information such as ID) within the cellular network and voice frames for the calls are switched by at least one mobile switching center between the handsets across bearer paths in the cellular network (MSC of cellular network switches calls between handsets in the cellular network) (column 2, lines 47-53; column 3, lines 5-28, 58-67; figure 1); and

a real-time exchange (dispatch controller) that interfaces to at least one mobile switching center in the cellular network to provide group voice services (group calls) therein (figure 1, dispatch controller is connected to the MSC),

wherein the group voice services provide a full-duplex Push-to-Conference (P2C) session (full duplex communication links) between an initiator (originating device) and one or more other participants (target wireless devices) (column 4, lines 34-67; column 5, lines 1-10),

wherein the P2C session comprises a full-duplex conference call (column 4, lines 34-67; column 5, lines 1-10),

both the real-time exchange and the handsets participating in the P2C session communicate with each other using the call setup and in-band signaling within the cellular network (dispatch controller interfaces MSC which processes call requests in accordance with known techniques) (column 4, lines 47-65),

such that at least one mobile switching center routes an originating leg of the group voice services from an originating handset to the real-time exchange (MSC routes received call requests to dispatch controller) (column 4, lines 1-10),

the real-time exchange initiates one or more terminating legs of the group voice services to one or more terminating handset through at least one mobile switching center (dispatch controller establishes communication links with target wireless devices via the MSC) (column 4, lines 47-65), and

the real-time exchange switches the voice frames for the group voice services from the originating handset to the terminating handset across the bearer paths (dispatch controller controls the switching for the group call) and through at least one mobile switching center that switches the voice frames for both the calls and the group voice services in the cellular network (MSC controls full duplex radio channels to be used by target devices for the group call) (column 4, lines 47-67).

Sanders does not explicitly teach that the system is capable of providing a half-duplex Push-to-Talk (P2T) session that comprises a half-duplex dispatch call and that a half-duplex P2T session is capable of being upgraded to the full-duplex P2C session by invoking "Upgrade to Conference" on one of the handsets participating in the P2T session which results in a message being sent to the real-time exchange and the real-time exchange upgrading the half-duplex P2T session to the full-duplex P2C session. Edwards discloses a method and apparatus for providing full duplex dispatch (title). Edwards teaches that a dispatch communications system is capable of both half and full duplex dispatch calls (paragraphs 12, 17). Edwards additionally teaches that a user

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who establishes a half-duplex call (half-duplex P2T session) may upgrade to a full duplex call (full-duplex P2C session) by pressing one or more keys or a menu button ("Upgrade to Conference" initiation) on the mobile device (paragraph 11) that invokes sending a signal (message) to the system controller to establish the full duplex communication call (full-duplex P2C session). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sanders to also be able to support half-duplex calls, as taught by Edwards, in order to gain benefits that are readily known in the art for half-duplex calls such as the ability for one user to immediately connect with another user or a group of users and have a private conversation with the press of one button. It would have also been obvious to one ordinary skill in the art at the time the invention was made to further modify the invention of Sanders to allow users to upgrade a half duplex call to a full duplex call, also taught by Edwards, in order to allow utilize the quick call set-up provided by half duplex PTT calls while allowing users to take advantage of full duplex operation if desired.

Regarding claims 2 and 44, Edwards teaches the participants comprise one or more contacts, one or more groups of contacts, or a subset of a group of contacts (paragraph 21).

Regarding claims 3 and 45, Edwards teaches the initiator initiates the full-duplex P2C session by invoking "Push-to-Conference" on their handset (paragraph 21).

Regarding claims 4 and 46, Edwards teaches the initiator upgrades an established half-duplex Push-to-Talk (P2T) session to the full-duplex P2C session by

invoking "Upgrade to Conference" on their handset (paragraphs 11, 16; activating a key or menu item for full duplex dispatch).

Regarding claims 5 and 47, Sanders teaches the initiator's handset signals the real-time exchange via the cellular network, and the real-time exchange initiates and manages the full-duplex P2C session (column 3, lines 56-67; column 4, lines 1-18; call request signal reaches dispatch controller through cellular network and dispatch controller sets up full duplex communication link with originating device).

Regarding claims 6 and 48, Sanders teaches the real-time exchange causes the cellular network to perform call setup with the other participants for the full-duplex P2C session, and the real-time exchange initiates and manages the full-duplex P2C session (column 4, lines 47-65; column 5, lines 1-10; dispatch controller transmits call setup to target wireless devices through MSC and controls the call).

Regarding claims 7 and 49, Sanders teaches the real-time exchange causes the cellular network (MSC) to signal the other participants to join the full-duplex P2C session (column 4, lines 47-67; MSC transmits call request signals to target wireless devices).

Regarding claims 9 and 51, Edwards teaches the real-time exchange mixes audio streams from the initiator and other participants, and delivers these mixed audio streams to the initiator and other participants (paragraphs 12, 18).

Regarding claims 12 and 54, Edwards teaches initiator can downgrade the full-duplex P2C session to a half-duplex P2T session (paragraph 11).

4. Claims 8, 16, 50, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders, III et al. (US 6,138,011) (hereinafter Sanders) in view of Edwards (US 2004/0228292) as applied to claims 1 and 43, and further in view of Boyle et al. (US 6,606,305) (hereinafter Boyle).

Regarding claims 8 and 50, the combination of Sanders and Edwards teaches the limitations set forth in claims 1 and 43, but does not explicitly teach that the other participants invoke "Join Conference" on their handsets to join the full-duplex P2C session. Boyle discloses an apparatus, method, and system for automatic telecommunication conferencing and broadcasting. Boyle teaches that an end user decides to join or not join a session by entering a code on their handset (column 6, lines 30-48). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile stations of Sanders and Edwards to allow a recipient of the full-duplex call to indicate whether or not he/she wants to join, as taught by Edwards, in order to increase the flexibility of the system by giving the recipient the capability to accept/reject the full-duplex dispatch call.

Regarding claims 16 and 58, Edwards teaches the limitations set forth in claims 1 and 43, but does not explicitly teach that the full-duplex P2C session continues when the initiator disconnects the call, if at least two of the other participants do not disconnect. Boyle teaches that the conference communication session is maintained until the last two end users terminate the call (column 7, lines 8-19). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made

to modify the invention of Sanders and Edwards to allow the full-duplex call to be maintained when particular participants disconnect, as taught by Boyle, in order to allow participants who want remain on the conference line to communicate and allow others to join at a later time if desired or needed.

5. Claims 10 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders, III et al. (US 6,138,011) (hereinafter Sanders) in view of Edwards (US 2004/0228292) as applied to claims 1 and 43, and further in view of Sarkar et al. (US 7,236,580) (hereinafter Sarkar).

The combination of Sanders and Edwards teaches the limitations set forth in claims 1 and 43, but does not explicitly teach the initiator and other participants can choose to remain silent by invoking a "mute" option on their handsets, which causes the handset's microphone to be muted. Sarkar discloses a method and system for conducting a conference call. Sarkar teaches that a passive participant may mute his/her audio output and listen to a conference call. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sanders and Edwards to allow a participant of the full duplex call to mute his/her audio output, as taught by Sarkar, in order to allow a call conference participant to selectively participate in the conference call while attending to another matter.

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6. Claims 11 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders, III et al. (US 6,138,011) (hereinafter Sanders) in view of Edwards (US 2004/0228292) as applied to claims 1 and 43, and further in view of Ahmed et al. (US 7,085,364) (hereinafter Ahmed).

The combination of Sanders and Edwards teaches the limitations set forth in claims 1 and 43, but does not explicitly teach the initiator can add or drop participants during the full-duplex P2C session. Ahmed teaches that an initiator of a conference call can drop or add participants during the call (column 7, lines 43-65). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sanders and Edwards to include the ability to add drop users during the call, as taught by Ahmed, in order to allow the initiator of the full duplex call to more efficiently manage the participants of the call thus increasing the flexibility of the system.

7. Claims 13, 15, 55, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders, III et al. (US 6,138,011) (hereinafter Sanders) in view of Edwards (US 2004/0228292), as applied to claims 1 and 43, and in further view of Wilson (US 6,192,119).

Regarding claims 13 and 55, the combination of Sanders and Edwards teaches the limitations set forth in claims 1 and 43, but does not explicitly teach all charges related to the full-duplex P2C session are charged to the initiator. Wilson teaches billing the initiator of the conference call for the call as a known concept (column 1, lines 30-

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47). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sanders and Edwards, to include the capability to charge the initiator of the conference call for all charges, as taught by Wilson, in order to allow the conference initiator to bear the cost of all calls which is better suited for business conferencing or social chat lines.

Regarding claims 15 and 57, the combination of Sanders and Edwards teaches the limitations set forth in claims 1 and 43, but does not explicitly teach the initiator and other participants in the full-duplex P2C session are all charged for usage. Wilson discloses telephone conferencing systems (title). Wilson teaches the billing of all participants of a conference call (column 1, lines 30-47). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sanders and Edwards to include the capability to charge all participants of the full duplex call, as taught by Wilson, in order to allow all individual participants to bear the costs of their own calls which is better suited for residential or domestic use.

8. Claims 14 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders, III et al. (US 6,138,011) (hereinafter Sanders) in view of Edwards (US 2004/0228292), as applied to claims 1 and 43, and further in view of Botterell et al. (US 3,912,874) (hereinafter Botterell).

The combination of Sanders and Edwards teaches the limitations set forth in claims 1 and 43, but does not explicitly teach the full-duplex P2C session is terminated when the initiator disconnects the call, even if the other participants do not disconnect.

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Botterell discloses a conference arrangement. Botterell teaches that when a conference originator decides to end a conference, all the conferee ports are released (column 5, lines 40-45). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sanders and Edwards to allow the full duplex call to terminate when the call initiator disconnects, as taught by Botterell, in order to give full control of the call to the initiator and not allow any communication between the participants to occur without the initiator being connected to the call.

Response to Arguments

9. Applicant's arguments filed 7/13/11 have been fully considered but they are not persuasive.

Applicant submits that one of ordinary skill in the art would not and combine Sanders and Edwards for which the Examiner respectfully disagrees. In the combination of Sanders and Edwards, the dispatch controller of Edwards is being modified with the capability to handle half-duplex calls and the ability to upgrade an existing half-duplex call to a full-duplex call as taught by Edwards. This combination would have been obvious to one of ordinary skill in the art because the modified system would provide benefits that are readily known in the art for half-duplex calls such as the ability for one user to immediately connect with another user or a group of users and have a private conversation with the press of one button and would provide utilization of quick call set-up provided by half duplex PTT calls with the option to take advantage of

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full duplex operation if desired. The combination would have also been obvious because a skilled artisan would recognize that a system that provides full-duplex dispatch calls could also provide half-duplex dispatch calls because a half-duplex dispatch call is one leg or link of a full-duplex dispatch call.

Applicant submits that one of ordinary skill in the art cannot combine Sanders and Edwards, for which the Examiner respectfully disagrees. In response to this submission, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant submits that the combination of Sanders and Edwards does not teach or suggest the limitations of Applicants' claims directed to a real-time exchange that interfaces to a mobile switching center in the cellular network to provide both the half-duplex Push-to-Talk and full-duplex Push- to-Conference capabilities in the cellular network, for which the Examiner respectfully disagrees. The combination of Sanders and Edwards is the dispatch controller interfaced with a mobile switching center in the cellular network of Edwards (figure 1) modified with the capability to handle half-duplex calls and the ability to upgrade an existing half-duplex call to a full-duplex call as taught by Edwards therefore teaching the aforementioned claim limitations.

Accordingly for these reasons, the rejection(s) from the previous office action have been maintained.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAM HUYNH whose telephone number is (571)272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam Huynh/
Examiner, Art Unit 2617

/George Eng/
Supervisory Patent Examiner, Art Unit 2617